

# Massachusetts

## Science and Engineering Profile

	STATE	U.S.	Rank		STATE	U.S.	Rank
Doctoral scientists, 1995	20,731	453,928	5	Total R&D performance, 1995 (millions)	\$9,969	\$177,210	4
Doctoral engineers, 1995	3,583	86,738	7	Industry R&D, 1995 (millions)	\$7,416	\$130,332	5
S&E doctorates awarded, 1996	1,575	27,230	4	Academic R&D, 1996 (millions)	\$1,174	\$22,481	6
of which, in engineering	24%	23%		of which, in life sciences	40%	56%	
in life sciences	24%	25%		in engineering	20%	16%	
in social sciences	18%	15%		in physical sciences	15%	10%	
S&E postdoctorates, 1996	3,778	37,019	2	Higher education current-fund expenditures, 1995 (millions)	\$7,974	\$182,602	6
in doctorate-granting institutions							
S&E graduate students, 1996	23,060	430,631	4	Number of SBIR awards, 1990-1997	4,887	31,155	2
in doctorate-granting institutions				Patents issued to state residents, 1997	2,575	61,699	9
Population, 1997 (000s)	6,118	271,464	13	Gross state product, 1996 (billions)	\$208.6	\$7,677.4	11
Civilian labor force, 1997 (000s)	3,260	137,564	13	of which, agriculture	1%	2%	
Personal income per capita, 1997	\$31,524	\$25,598	4	manufacturing, mining, construction	19%	23%	
Federal spending				transportation, communication, utilities	6%	8%	
Total expenditures, 1997 (millions)	\$37,378	\$1,405,060	12	wholesale and retail trade	15%	16%	
R&D obligations, 1996 (millions)	\$3,180	\$66,087	6	finance, insurance, real estate	24%	19%	
				services	26%	20%	
				government	9%	12%	

Rankings and totals are based on data for the 50 states, D.C., and Puerto Rico.

Data on S&E postdoctorates and S&E graduate students include health fields.

## Federal Obligations for Research and Development by Agency and Performer: Fiscal Year 1996

[Thousands of Dollars]

	Total	Federal Intramural	All FFRDCs	Industrial firms	Universities & Colleges	Other nonprofits	State & local government	State rank
<b>Total, all agencies</b>	3,179,959	300,198	289,603	1,210,405	760,972	613,508	5,273	6
Department of Agriculture	21,363	16,334	0	0	4,794	235	0	21
Department of Commerce	52,014	32,457	0	14,936	3,249	367	1,005	5
Department of Defense	1,684,556	204,263	288,832	1,044,281	113,371	33,809	0	6
Department of Energy	90,837	4,752	0	3,571	75,230	7,284	0	13
Dept. of Health & Human Services	975,416	1,770	0	89,991	377,600	503,919	2,136	3
Department of Interior	5,353	4,684	127	5	537	0	0	26
Department of Transportation	44,087	21,462	0	18,817	1,676	0	2,132	3
Environmental Protection Agency	13,467	0	0	7,002	5,461	1,004	0	12
Nat'l Aeronautics & Space Admin.	143,848	12,556	644	20,721	54,116	55,811	0	9
National Science Foundation	149,018	1,920	0	11,081	124,938	11,079	0	3
<b>State rank</b>	6	12	4	8	3	1	5	

Federal R&D obligations are as reported by funding agencies.

FFRDC = federally funded research and development center

SBIR = small business innovation research

na = not applicable